

DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

Permitting and Compliance Division
Water Protection Bureau

Name of Project: Barretts Minerals Dillon Plant

Type of Project: Talc milling and processing

Location of Project: 8625 Highway 91 South

City/Town: Dillon

County: Beaverhead

Description of Project: The Barretts Minerals, Inc. Dillon Plant is a talc milling and beneficiation facility, which acquires its ore from two local talc mines. Talc ore is processed at the plant into powder, cakes and pellets via multiple types of crushing washing and purifying methods. In addition to the MGWPCS permit number MTX000094 BMI Dillon Plant facility maintains Montana Air Quality Permit #1995-14, Montana Air Quality Operating Permit #OP1995-04 and Operating Permit number 00009. This checklist Environmental Assessment is specifically targeted at potential water quality impacts due to discharge under MGWPCS permit number MTX000094 and is tiered to Montana Environmental Policy Act (MEPA) analysis and disclosure conducted during permitting and subsequent amendments to the mill's operating permit for the mill at large. Previous MEPA analyses completed for this facility that this analysis is tiered to include:

- Amendment 001 - October 25, 1990 - Modification to tailings disposal and processing. Add 7.25 acres for dry waste disposal. EA issued on April 20, 1990.
- Amendment 002 - December 14, 1993 - Dry tailings disposal site, Boka pit. Pit was reclaimed and bond released. EA issued on June 10, 1993.
- Amendment 003 - January 21, 2000 - Expand the dry waste disposal areas. A checklist EA was prepared on September 25, 1996. Minor Revision 00-001 - February 2, 2000 - Approved mining of gravel from unmined dry waste disposal area. Internal checklist EA completed on February 2, 2000.
- Amendment 004 - October 1, 2001 - Expansion of wet tailings and dry waste rock disposal operations. New bond set at \$209,100..

Agency Action and Applicable Regulations: The proposed action is renewal of individual Montana Ground Water Pollution Control System (MGWPCS) permit authorizing discharge of boiler blow-down water, miscellaneous laboratory wastewater and reverse osmosis water treatment back flush wastewater. All discharge authorized by this permit percolates to ground water from existing Outfall 001, known as the Boiler Pond. Renewal of MGWPCS number MTX000094, has been drafted pursuant to the Montana Water Quality Act, Title 75, Chapter 5, Montana Code Annotated; and, Administrative Rules of Montana 17.30.501 *et seq.*, 17.30.601 *et seq.*, 17.30.701 *et seq.*, and 17.30.1001 *et seq.*

Summary of Issues: The existing MGWPCS permit number MGWPCS0094 authorizes discharge of boiler blow-down and miscellaneous laboratory type wastewaters. The Boiler Water System has been upgraded since the permit was issued on September 9, 1996. The upgraded boiler water system also includes discharge of reverse osmosis water treatment back

flush wastewater and more recycling of Boiler Water System to other process circuits within the mill. Accordingly, the volume of water discharged to Outfall 001 is expected to decrease and the composition may change because a greater proportion of water discharged to Outfall 001 is from sources other than the boiler blow-down.

Affected Environment & Impacts of the Proposed Project:

Y = Impacts may occur (explain under Potential Impacts).

N = Not present or No Impact will likely occur.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001 - 004 for additional analysis more directly related to this resource.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[N] The proposed numeric limits in the permit are based on the interpretation of narrative water quality standards for most sensitive beneficial uses. The limits are ground water compliance limits set at the end on the mixing zone. The proposed permit also requires effluent monitoring for flow, metals and VOCs to identify the presence of potential parameters of concern from the RO back flush and laboratory wastewaters and better quantify potential parameter of concern loading rates. The permit also requires a ground water monitoring study to better define site hydrogeology. Discharge and monitoring in compliance with the limitations and requirements in the permit is not expected to cause a significant impact to water quality.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] The facility currently maintains and is compliant Montana Air Quality Permit # 1995-14. No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR	[N] No impacts will likely occur due to renewal of the MGWPCS

IMPACTS ON THE PHYSICAL ENVIRONMENT	
ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed)	permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001 - 004 for additional analysis more directly related to this resource.

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] No impacts will likely occur due to renewal of the MGWPCS permit and discharge of wastewater as authorized by the permit. See MEPA analyses for Operating Permit Amendments 001
22(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N]

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
22(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	[]
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	[]

23. Description of and Impacts of other Alternatives Considered:

A. No Action: The no action alternative is to not renew the expired permit such that it would remain administratively extended with existing permit limits and monitoring for Outfall 001. The existing permit does not include the monitoring specifically designed to detect potential parameters of concern from the added RO back flush water. Therefore, the no action alternative may result in discharge of pollutants of concern at concentrations in excess of the applicable standards that previously did not exist in the effluent.

B. Renewal and Modification Permit Action: The permit renewal and modification action regulates discharge from additional sources from the RO back flush system to the Boiler Pond/Outfall 001. Compliance limits are based on the most stringent applicable water quality standards. Also a ground water study and ambient monitoring is required as well as flow monitoring, to better define the effluent quality and quantity, loading rate, transport, fate and effect.

24. Summary of Magnitude and Significance of Potential Impacts: This EA finds no significant impacts are likely to occur due to renewal of the proposed MGWPCS permit and discharge in accordance with the permit.

25. Cumulative Effects: The mill facility also operates an 8.56 acre-feet wet tailing pond/water reclaim facility with an estimated capacity of 40 acre-feet. The tailing pond facility is hydrogeologically down gradient of the boiler pond/Outfall 001 and is not lined. The tailing facility discharges to ground water are regulated and monitored under the facilities Operating Permit. The MGWPCS permit requires a hydrogeologic characterization study to evaluate potential cumulative impacts from the Boiler Pond/Outfall 001 and the tailing facility discharges.

26. Preferred Action Alternative and Rationale: Issue renewed and modified MGWPCS permit number MTX000094 for the Dillon Plant facility to Barretts Minerals, Inc.

Recommendation for Further Environmental Analysis:

☐ EIS ☐ More Detailed EA ☒ No Further Analysis

Rationale for Recommendation: Finding of no significant impacts documented at number 24 and 25 of this document.

27. Public Involvement: This permit and EA are being posted for public comment on June 18, 2007. The comment period will close July 17, 2007.
28. Persons and agencies consulted in the preparation of this analysis: DEQ Environmental Management Bureau Hard Rock Mining Section and DEQ Air Resources Management Bureau were consulted during this EA analysis.

EA Checklist Prepared By:

P. Skubinna

Date

Approved By:

Bonnie Lovelace, Chief
Water Protection Bureau

Date